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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight E5053A

Keysight / Agilent E5053A Microwave Downconverter for E5052 Signal Source Analyzer The Keysight/Agilent E5053A is a microwave downconverter accessory used with E5052A/B signal source analyzers to extend phase-noise and source-analysis coverage above the base 7 GHz RF IN range, supporting measurements to 26.5 GHz or higher millimeter bands depending on configuration. OEM E5052/E5053 system literature positions the E5053A as the LO/downconverter front end for microwave SSA measurements. Microwave VCO and synthesizer phase-noise tests, millimeter-wave source characterization with appropriate mixers/extenders, and E5052-based SSA microwave setups. The Keysight/Agilent E5053A is a microwave downconverter accessory used with E5052A/B signal source analyzers to extend phase-noise and source-analysis coverage above the base 7 GHz RF IN range, supporting measurements to 26.5 GHz or higher millimeter bands depending on configuration. OEM E5052/E5053 system literature positions the E5053A as the LO/downconverter front end for microwave SSA measurements. Microwave VCO and synthesizer phase-noise tests, millimeter-wave source characterization with appropriate mixers/extenders, and E5052-based SSA microwave setups.



MODEL

**Agilent / Keysight
E5053A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

E5053A

LISTING

<https://aumictechlabs.com/products/e5053a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight E5053A is a microwave downconverter that extends the frequency measurement range of the Keysight E5052A/B Signal Source Analyzer. This instrument enables phase noise characterization of microwave and millimeter-wave signals through cross-correlation measurement techniques. The E5053A integrates directly with the E5052A/B user interface, providing enhanced phase noise sensitivity across extended frequency bands. For measurements beyond 26.5 GHz, the E5053A operates with Keysight 11970 series harmonic mixers to achieve phase noise analysis up to 110 GHz.

Technical Specifications

Product Type: Microwave downconverter

Frequency Extension: Extends E5052B maximum frequency to 26.5 GHz

Extended Range with Harmonic Mixers: Phase noise measurements to 110 GHz (with 11970 series mixers)

RF Input Connector: APC-3.5 (female), 50 Ω nominal

Measurement Method: Cross-correlation technique

Key Features

- Direct integration with E5052A/B Signal Source Analyzer user interface
- Enhanced phase noise sensitivity for microwave and millimeter-wave frequencies
- Compatible with Keysight 11970 series harmonic mixers for extended frequency coverage
- Single APC-3.5 RF input connection

Typical Applications

- Microwave phase noise characterization
- Millimeter-wave signal analysis
- Harmonic and spurious content measurement in microwave sources
- Extended-range frequency stability testing

Compatibility & Integration

The E5053A interfaces exclusively with the Keysight E5052A/B Signal Source Analyzer platform. Connection requires RF cables (Keysight part numbers E5053-61621 or E5053-61622), USB connectivity (part number 8121-0770), and BNC interconnects (part number 8120-1839). Harmonic mixer functionality requires Keysight 11970 series components for frequencies above 26.5 GHz.

E5053A Characteristics / Specifications

PARAMETER	VALUE
Model	E5053A
Instrument Type	Microwave downconverter for SSA
Host Analyzer Family	E5052A / E5052B signal source analyzers
Base Host Rf Range	10 MHz to 7 GHz without downconverter
Extended Coverage Class	to 26.5 GHz class with E5053A system configuration
Higher Band Path	to 110 GHz class with additional millimeter accessories
Measurement Role	Frequency downconversion for phase-noise/spur analysis
Rf Interface Class	Microwave coaxial interfaces per E5053 sheet
Lo Architecture	Integrated downconverter LO path for SSA
System Parameters Measured	SSB phase noise, spurs, residual FM, jitter via host
Remote Control	Controlled through host E5052 interfaces
Safety Class	Observe published maximum ratings
Chassis Form	Benchtop microwave downconverter module/instrument
Brand Lineage	Keysight / Agilent
Compatible Hosts	E5052A and E5052B
Warmup Spec Class	Follow host SSA 30 minute class warm-up
Operating Temperature Spec Class	Follow E5052/E5053 system sheet
Power Class	AC mains powered accessory class
Documentation Scope	OEM E5052/E5053 system data sheets
Installed Options	Determine final millimeter coverage
Manufacturer Documentation	OEM datasheet and user documentation
Configuration Dependency	Final limits follow installed options and faceplate
Metrology Note Class	Use calibration certificate for finest uncertainties
Operating temperature	Spec Class: Follow E5052/E5053 system sheet

E5053A Specifications

PARAMETER	VALUE
Key Features	Microwave frequency extension for E5052
Works with E5052A and E5052B platforms	Supports 26.5 GHz class SSA configurations
Technical Specifications	Model: E5053A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Spec Class: Follow E5052/E5053 system sheet
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Operating Temperature Spec Class	Follow E5052/E5053 system sheet
Power Class	AC mains powered accessory class
Documentation Scope	OEM E5052/E5053 system data sheets
Installed Options	Determine final millimeter coverage
Manufacturer Documentation	OEM datasheet and user documentation
Configuration Dependency	Final limits follow installed options and faceplate
Metrology Note Class	Use calibration certificate for finest uncertainties Notes From Keysight E5052B/E5053A signal source analyzer system documentation. Exact millimeter frequency ceilings depend on installed mixers/extendors and options.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Metrology Note Class	Use calibration certificate for finest uncertainties
Notes	
From Keysight E5052B/E5053A signal source analyzer system documentation. Exact millimeter frequency ceilings depend on installed mixers/extenders and options.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.